

CLAIMS

What is claimed is:

1. A tread plate comprising:

a. a plate having opposing side edges and a first connecting edge and a second
5 connecting edge extending between said side edges, said first connecting edge including
male connector means and said second connecting edge including female connector
means;

b. a plurality of ribs protruding from said plate, said ribs extending substantially between
said opposing side edges and being arranged in spaced relation across said plate to define
10 tread channels therebetween; and,

c. reinforcement means integrally formed within said plate, said reinforcement means
extending substantially between said opposing side edges and including a fastening
receiver adjacent each side edge.

2. A tread plate as in claim 1 in which said male connector means comprises a flange.

15 3. A tread plate as in claim 2 in which said flange is v-shaped in cross-section, including a pair
diverging wing portions.

4. A tread plate as in claim 3 in which said wing portions terminate on one side of a respective said
rib, and in which fillets are provided on the other side of said rib.

5. A tread plate as in claim 1 in which said female connector means comprises a recess.
6. A tread plate as in claim 5 in which said recess includes a base, an open top portion, and converging walls extending between said base and said open top portion.
7. A tread plate as in claim 6 in which said recess is located within one side of a female connector head and in which fillets are provided on the other side of said female connector head.
8. A tread plate as in claim 1 in which said reinforcement means comprises a tube, and further including at least two rail bolts passing inwardly into a respective said fastening receiver.
9. A tread plate as in claim 8 in which said fastening receiver comprises an open end, sized to be engaged by a threaded end of a respective said rail bolt.
10. A tread plate as in claim 1 including a plurality of apertures within said tread channels.
11. A tread plate as in claim 10 in which said apertures comprise elongated slots.
12. A tread plate as in claim 1 manufactured from extruded aluminum.
13. A tread plate as in claim 1 in which said reinforcement means is adjacent said male connector means, and further including a fillet between said reinforcement means and said male connector

means.

14. A tread plate as in claim 1 in which said ribs extend both from an upper side of said plate and from a lower side of said plate.

15. A tread plate as in claim 14 in which said ribs have an outer edge, and further including a plurality of transverse notches in said outer edge.

16. A walk ramp, comprising:

a. first and second tread plates, each said tread plate comprising: a plate having opposing side edges and a first connecting edge and a second connecting edge extending between said side edges, said first connecting edge including male connector means and said second connecting edge including female connector means; a plurality of ribs protruding from said plate, said ribs extending substantially between said opposing side edges and being arranged in spaced relation across said plate to define tread channels therebetween; reinforcement means integrally formed with said plate, said reinforcement means extending substantially between said opposing side edges and including a fastening receiver adjacent each side edge, said male connector means of said first tread plate being slidably engaged with said female connector means of said second tread plate;

b. first and second side rails, said rails having inwardly facing channels sized to accept said opposing side edges of said first and second tread plates; and,

c. means for connecting said first and second tread plates to said first and second side

rails.

17. A walk ramp as in claim 16 in which said means for connecting said first and second tread plates to said first and second side rails comprises a plurality of rail bolts passing inwardly through said side rails and threadably engaging said reinforcement means.

5 18. A walk ramp as in claim 17 further including a plurality of channel bolts and respective nuts, said bolts passing through said channels and said opposing side edges of said first and second tread plates.

19. A walk ramp as in claim 16 further including an apron attached to an upper end of each of said side rails.

10 20. A walk ramp as in claim 18 further including a skid plate attached to a lower end of each of said side rails, in which said channel bolts and respective nuts secure said skid plate to said side rails.

21. A walk ramp as in claim 16 in which said first and second tread plates and said first and second side rails are formed from extruded aluminum.

15 22. A walk ramp as in claim 16 in which said first and second tread plates include at least one gripping aperture, sized and configured for hand gripping said ramp.